
10. Possession

Program Name: Possession.java

Input File: possession.dat

The time that a football team possesses the ball is one of the most important statistics in football. The longer a team possesses the football, the more opportunities they have to score and the fewer opportunities their opponent has to score. The back-up quarterback is frequently assigned the job of keeping this important statistic.

There are four quarters in a football game and the time clock starts at 15:00 (15 minutes, 0 seconds) at the beginning of each quarter and counts down to 0:00 (0 minutes, 0 seconds). Every time his team gets the ball, the back-up quarterback records the minutes and seconds left in the quarter. Similarly, each time his team loses possession of the ball, he records the minutes and seconds left in the quarter.

You are to write a program that he can use to compute the time of possession for his team.

Input

The first line of input will contain a single integer n that indicates the number of games to follow. Each of the next n lines will have the name of the team, without spaces, followed by one or more data sets in the form $Qx\ mm:ss$ $Qy\ mm:ss$. The quarter that his team began possession of the ball is denoted by x and is followed by the number of minutes and seconds left in that quarter when his team gained possession of the ball. The quarter his team lost possession of the ball is denoted by y and is followed by the number of minutes and seconds left in that quarter when his team lost possession of the ball.

Output

For each game, you will print his team's name and the number of minutes and seconds that his team possessed the ball during the ballgame, as shown below.

Example Input File

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```
UT_Austin Q1 15:00 Q1 5:13 Q2 10:45 Q2 7:33 Q2 4:12 Q3 7:33 Q4 10:27 Q4 4:00
TX_Tech Q1 10:55 Q2 12:34 Q2 4:23 Q2 0:00 Q3 15:00 Q3 7:12 Q3 2:01 Q4 9:12 Q4
7:55 Q4 4:59
```

Note: The second input line in the printed version above stretches across two lines, but is actually only one line in the `possession.dat` input file.

Example Output to Screen

```
UT_Austin 31:05
TX_Tech 36:17
```